



Impact of ambient temperature on children's health: A systematic review

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Abstract:

Children are vulnerable to temperature extremes. This paper aimed to review the literature regarding the relationship between ambient temperature and children's health and to propose future research directions. A literature search was conducted in February 2012 using the databases including PubMed, ProQuest, ScienceDirect, Scopus and Web of Science. Empirical studies regarding the impact of ambient temperature on children's mortality and morbidity were included. The existing literature indicates that very young children, especially children under one year of age, are particularly vulnerable to heat-related deaths. Hot and cold temperatures mainly affect cases of infectious diseases among children, including gastrointestinal diseases, malaria, hand, foot and mouse disease, and respiratory diseases. Pediatric allergic diseases, like eczema, are also sensitive to temperature extremes. During heat waves, the incidences of renal disease, fever and electrolyte imbalance among children increase significantly. Future research is needed to examine the balance between hot- and cold-temperature related mortality and morbidity among children; evaluate the impacts of cold spells on cause-specific mortality in children; identify the most sensitive temperature exposure and health outcomes to quantify the impact of temperature extremes on children; elucidate the possible modifiers of the temperature and children's health relationship; and project children's disease burden under different climate change scenarios.

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Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Temperature

Temperature: Extreme Heat

Geographic Feature:

resource focuses on specific type of geography

None or Unspecified

Geographic Location:

resource focuses on specific location

Global or Unspecified

Climate Change and Human Health Literature Portal

Health Impact:

specification of health effect or disease related to climate change exposure

Injury

Mitigation/Adaptation:

mitigation or adaptation strategy is a focus of resource

Adaptation

Population of Concern: A focus of content

Population of Concern:

populations at particular risk or vulnerability to climate change impacts

Children

Resource Type:

format or standard characteristic of resource

Review

Timescale:

time period studied

Time Scale Unspecified

Vulnerability/Impact Assessment:

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

A focus of content